

- VA-13-1 Great Falls of the Potomac, the area by-passed by the canal. Jack Boucher, photographer, 1971.
- VA-13-2 View of Potomac River at Great Falls looking upstream from Observation Tower. The majestic character of this wild and untrammelled spot is vividly shown. Scanty flow is evidenced by light colored normal water line markings on rock formation. Washington Aqueduct Dam is shown in upper portion. Maryland on right and Virginia on left. Natives quoted as saying the water was as low or lower than during the drought conditions of 1930. Mr. Horyduzak, Photographer, 1943.
- VA-13-3 View of Potomac River looking downstream from the Great Falls of the Potomac. Reduction of stream in width during low water, is clearly shown by exposed beach on left side and indisputable normal water height markings shown on right side of photograph. Mr. Horyduzak, photographer, 1943.

Great Falls Canal (Cont.)

- VA-13-4 View of Great Falls of the Potomac River looking upriver from a lower point further downstream than view #2. Observation Tower visible on left. During flood conditions of 1936 and 1942, lower portion of this tower was under water. Low water conditions are clearly evidenced here by normal water markings on rock formations noted on right. In rear of front rock promontory, a sand beach is shown. Mr. Horyduzak, photographer, 1943.
- VA-13-5 Looking west upstream, towards the location of the erstwhile intake flume into canal from the upper reaches of the Potomac River above the Great Falls, on the old Potomack Canal built by George Washington. The plan contemplated canal navigation around the Great Falls of the Potomac River, located on the Virginia side of the Potomac, about 15 miles above Washington, D.C.

The Company was organized in 1785, and by 1802, this and three or four smaller canals were substantially completed and raft-like boats began operation with materials from the west to the city of Georgetown. "Although the canals and locks of the Potomac Canal were considered a great engineering accomplishment, the improvements to the river channel were inadequate. Disappointment grew as it became known that after the expenditure of more than one-half million dollars, the navigation of the Potomac was possible only at times of high water." (National Capital Parks booklet, issued by U.S. Interior Department).

The canal ceased to operate in 1828. Note uncut stone walls on either side of canal bed, and size of tree growth. Tables and benches shown are part of picnic grounds, at Great Falls, Virginia. Mr. Horyduzak, Photographer, 1943.

Great Falls Canal: Lock 1 HAER VA, 30 - GREFA, 1A -

- VA-13A-1 General view looking SE at top of east wall of Lock 1. Jack Boucher photographer, 1971.
- VA-13A-2 East wall of Lock 1 looking SE from top of lock showing tooled stonework in foreground where gate hardware fitted. Jack Boucher, photographer, 1971.
- VA-13A-3 East wall of Lock 1 looking NE from top of lock. Jack Boucher, photographer, 1971.
- VA-13A-4 General view from N of Lock 1. Jack Boucher, photographer, 1971.
- VA-13A-5 General view from S of Lock 1. Jack Boucher, photographer, 1971.
- VA-13A-6 East wall of Lock 1. Jack Boucher, photographer, 1971.
- VA-13A-7 South end of Lock 1 looking SE from top of lock. Jack Boucher, photographer, 1971.

Great Falls Canal: Lock 1 (Cont.)

- VA-13A-8 South end of east wall, Lock 1, looking NE. Jack Boucher, photographer, 1971.
- VA-13A-9 East wall of Lock 1 showing deformation of masonry. Jack Boucher, photographer, 1971.
- VA-13A-10 North end of Lock 1 showing sill. Jack Boucher, photographer, 1971.
- VA-13A-11 North end of Lock 1 showing sill and gate recess in west wall. Jack Boucher, photographer 1971.
- VA-13A-12 North end of Lock 1 showing gate recess in east wall. Jack Boucher, photographer, 1971.
- VA-13A-13 South end of Lock 1 showing gate recess in east wall. Jack Boucher, photographer, 1971.
- VA-13A-14 South end of Lock 1 showing gate recess in west wall. Jack Boucher, photographer, 1971.

Great Falls Canal: Lock 2 HAER VA, 30-GREFA, 1B-

- VA-13B-1 General view from top of Lock 2 looking NE. Jack Boucher, photographer, 1971.
- VA-13B-2 East wall of Lock 2 looking SE from top of lock. Jack Boucher, photographer, 1971.
- VA-13B-3 General view from S of Lock 2. Jack Boucher, photographer, 1971.
- VA-13B-4 East wall of Lock 2 showing masonry repairwork. Jack Boucher, photographer, 1971.
- VA-13B-5 West wall of Lock 2 looking N. Jack Boucher, photographer, 1971.
- VA-13B-6 East wall of Lock 2 looking N showing deformation of masonry. Jack Boucher, photographer, 1971.
- VA-13B-7 View of interior of Lock No. 2 on George Washington "Potowmack" Canal at Great Falls, Virginia. This lock is about 15 ft. in depth and possibly 70 or 60 ft. in length. Some 15 or 20 years ago, when a restoration was crudely attempted, the old oaken flooring, which was invariably placed at the bottom of canal locks, was roughly torn up and destroyed. The trunks and stumps of gigantic trees still remain from this restorative effort, and their girth indicates again the antiquity of this evidence of George Washington's work as an engineer.

Great Falls Canal: Lock 2 (Cont.)

The stones are of the red Seneca type and were evidently ferried from the Maryland side above the dam and then brought by sled or rollers to this location. These stones were beautifully hand-cut and fitted with precision and trim alignment. The walls were constructed two stones deep, and at the lower right hand corner of the photograph can be seen where onrushing waters, due to the floods of 1936 and 1942, went through the masonry and washed some of the lower stones away.

The recess on the right hand side shows where one of the lock gates moved back into place, to permit boats to move through easily.

This is one of the few examples of the work of General George Washington, the engineer, if not the only example extant, showing his original directive genius in engineering. As is well known, General Washington inherited Mt. Vernon from his brother Augustine and while he made many additions and corrections there, Mt. Vernon does not represent his original work or creation. Mr. Horyczak, Photographer, 1943.

- VA-13B-8 South end of Lock 2 showing gate recess in east wall. Jack Boucher, photographer, 1971.
- VA-13B-9 South end of Lock 2 showing deterioration of east wall. Jack Boucher, photographer, 1971.
- VA-13B-10 Detail of mason's mark inscribed on stone in east wall of Lock 2. Jack Boucher, photographer, 1971.
- VA-13B-11 Detail of stone work in east wall of Lock 2. Jack Boucher, photographer, 1971.

Great Falls Canal: Locks 3, 4 & 5 HAER VA, 30 - GREFA, 1C -

- VA-13C-1 Remnants of the last lock on the George Washington "Potowmack" Canal, just before the barge entered the Potomac River. The latter can be seen through the foliage of the tree which has grown up in the old canal bed.

On the left hand side of the photograph, not shown here in its entirety, are the old iron studdings which held the gates, to permit the barges to pass easily into the river. On the right hand side of the photograph is shown the crumbling remains of the lock with their recessed oval space clearly shown, into which the lock gate retrieved when the barge was lowered to the next level. The depth from the spot where the individual is shown pointing to the top of the lock, is about 24 or 25 ft., and the canal has been filled up with broken stones and silt to a considerable depth. The marks are clearly present where drills were hand-driven into the rock and either split by gunpowder or expansion of iron rods driven by sledge hammers. It is rather

Great Falls Canal: Locks 3, 4 & 5 (Cont.)

difficult to get down into this canal bottom at the present time, due to the density of growth and the depth of the canal from the terrain above. Mr. Horyczak, photographer, 1943.

- VA-13C-2 Looking SE through the cut where Locks 3, 4 and 5 were located. Jack Boucher, photographer, 1971.
- VA-13C-3 View of the mouth of George Washington's "Potowmack" Canal at the Great Falls of the Potomac River. The view is taken from a rock in the Potomac River looking up into the Canal. Trees and dense growth now fill the old aperture which once permitted barges to come down the Ohio Valley onto the broad expanse of the Potomac River. This view, taken September 1, 1943, evidences the very low water then existing on the Potomac River, as is clearly shown by the water marks on the rocks on the left hand side of the photograph. That portion where the individual is standing, up to the height of his hat, is normally underwater. Deep in the sand at this spot was found a part of one of the old handwrought lock hinges which formerly swung the first lock gates about 100 ft. inland from where this photograph was taken. Where the individual is pointing and elsewhere, are found the remnants of old iron wedges, which had been driven into the walls to cleave the rock or to form an aperture in which gunpowder could be exploded to clear away the opening. The rock in the immediate foreground of the right hand corner of the photograph shows two pieces of iron bars driven into its face, where it was formerly placed as part of the side wall of the canal. The torrential floods have washed it away into its present location. A critical survey of the rocks and apertures betray, at this low water period, the havoc that has been wrought by flash floods on the Potomac River at various times. Mr. Horyczak, photographer, 1943.
- VA-13C-4 View looking from the north of George Washington's "Potowmack" Canal at Great Falls on the Potomac River, taken September 1, 1943. The low water of the Potomac is definitely shown by the markings on the bank of the river, immediately across stream from where photograph was taken. The usual water mark existing under normal conditions, is shown on the rock in the immediate foreground at a point about even with the spectator's pipe. The spectator is pointing to the evidences of old drillings made in this hard rock by General Washington and his courageous crew, who either blasted or cleaved this opening in the solid wall of rock, to permit boats to pass around the Great Falls and thence into the Potomac River.

In the foreground, a slab of stone is shown, containing a broken bit of the old iron drills which were used to force this opening into nature's walls.

The heavy rock shown on the floor of the canal, leading out into the river, is the result of floods which have carried the rock from its location immediately to the left of the picture into the present location.

The whole work of building this canal represents a tremendous task by a great man and his valiant co-workers, in forcing this great vein with primitive instruments in those early days of the Republic. It surely could be made into a great national memorial to George Washington the engineer, by intelligent, careful and reverent restoration.
Mr. Horyduzak, photographer, 1943.